

**Notice of Allowability**

Application No.

09/484,610

Examiner

Annan Q Shang

Applicant(s)

ROECK ET AL

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2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed June 18, 2004.
2. ☒ The allowed claim(s) is/are 1-42.
3. ☒ The drawings filed on 18 January 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

## DETAILED ACTION

### *Allowable Subject Matter*

1. Claims 1-42 allowed.
2. The following is an examiner's statement of reasons for allowance: with respect claims 1, 16, 24, 27 and 41, of the instant invention is directed to method, cable modem termination system and apparatus for adjusting the power of a cable modem on a cable network. The relevant prior of records such as **Quigley et al (2001/0055319)** reference teaches averaging a plurality of channel power measurements to compensate for short-term fluctuations. **Cherubini (6,735,221)** teaches a communication network, which includes a Head end controller (HC), which sends data and medium-access control (MAC) information over a set of downstream channels to several stations and during a registration process of a station, HC detects a ranging request message from which the HC determines the round-trip delay and power correction value to be used by the cable modem for future upstream transmission. **Leano (6,453,472)**, teaches method and apparatus for periodic ranging with a cable modem and determines whether an actual power level of the cable modem requires adjustment to a desired power level and indicates to the cable modem to adjust power level to an adjusted power level that differs from the actual power level of the cable modem. However, neither **Quigley**, **Cherubini** nor **Leano** and any of the cited references teach or suggest, alone or in combination the feature of the head-end, calculating a power adjustment using a plurality of recent power measurements of signals "taken over a plurality of ranging

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requests" from the cable modem, as recited in the instant invention with respect to independent claims 1, 16, 24 and 41.

With respect to independent claims 11, 32 and 42 neither **Quigley, Cherubini** nor **Leano** and any of the cited references teach or suggest, alone or in combination the feature a method of controlling upstream power of a cable modem using a ranging protocol with a first technique to adjust cable modem power that does not average recent power measurements, determining that signals contain more than a threshold of noise or fluctuation, and using a second technique that averages recent cable modem power measurements to calculate an adjustment.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Quigley et al (6,650,624) disclose cable modem apparatus and method.

Mahoney (6,360,369) discloses interference tolerant modem.

Zhang et al (6,519,449) disclose method and apparatus for signal power control in a wireless communication system.


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Annan Q Shang** whose telephone number is **703-305-2156**. The examiner can normally be reached on **700am-500pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **John W Miller** can be reached on **703-305-4795**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the **Electronic Business Center (EBC)** at **866-217-9197 (toll-free)**.



**Annan Q. Shang.**



**JOHN MILLER**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**